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MICRON TECHNOLOGY, INC.

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA**

MICRON TECHNOLOGY, INC.,

Plaintiff,

v.

UNITED MICROELECTRONICS  
CORPORATION, FUJIAN JINHUA  
INTEGRATED CIRCUIT CO., LTD., and  
DOES 1-10,

Defendants.

**Case No. 3:17-CV-06932-MMC**

**MICRON TECHNOLOGY, INC.'S  
SECOND AMENDED COMPLAINT**

- (1) Defend Trade Secrets Act
- (2) Civil RICO, 18 U.S.C. § 1962(c)
- (3) Civil RICO, 18 U.S.C. § 1962(d)
- (4) California Uniform Trade Secrets Act
- (5) Idaho Trade Secrets Act

**DEMAND FOR JURY TRIAL**

Plaintiff Micron Technology, Inc. ("Micron") brings this action against United Microelectronics Corporation ("UMC"), Fujian Jinhua Integrated Circuit Co., Ltd. ("Jinhua"), and Does 1-10 as follows.

**REDACTED VERSION OF DOCUMENT(S) FILED UNDER SEAL**

**NATURE OF THE ACTION**

1. Micron brings this action under the Defend Trade Secrets Act, the civil provisions of the Racketeer Influenced and Corrupt Organizations Act (“RICO”), California’s Uniform Trade Secrets Act, and Idaho’s Trade Secrets Act against UMC, Jinhua, and Does 1-10 for theft of Micron’s trade secrets and other misconduct. The trade secrets relate to the design and manufacture of Dynamic Random Access Memory (“DRAM”) integrated circuits – an industry with over \$50 billion in annual revenues worldwide.

2. Defendant UMC is a semiconductor foundry with operations centered in Taiwan, China, and Singapore. UMC’s primary business is to mass produce integrated-circuit logic products based on designs and technology developed and provided by its customers. Although lacking any significant, independent intellectual property in advanced DRAM technology, UMC executed a deal with Defendant Jinhua – a start-up intending to manufacture DRAM products in Mainland China – to provide Jinhua with DRAM process technology and enable Jinhua to become a leading force in the DRAM business (the “UMC/Jinhua DRAM Project”). How UMC could deliver such technology was a mystery until criminal indictments in Taiwan exposed the defendants’ secret, illegal plan.

3. On February 7, 2017 and February 14, 2017, the Taiwanese criminal authorities conducted raids on UMC’s facilities in Taiwan and, on August 8, 2017, indicted UMC and employees J.T. Ho (“Ho”), Kenny Wang (“Wang” or “KW”) and Leh-Tian Rong (“Rong”). The original and certified translations of the Indictment Decision of the Taiwan Taichung District Prosecutor’s Office, Case No. 106-Zhen-Zi Nos. 11035, 4520, 5612, and 5613 are attached as Exhibits 1 and 2 (the “Taiwan Indictment”). The Taiwan Indictment documents the theft and use of Micron’s trade secrets in the UMC/Jinhua DRAM Project, as well as UMC’s effort to conceal evidence from Taiwan prosecutors:

- a. Since at least the fall of 2015, UMC and the founders of Jinhua developed and set in motion a plan for UMC to recruit key personnel from Micron’s Taiwanese affiliate – Micron Memory Taiwan Co., Ltd. (“MMT”) – including MMT’s former Site Director, Stephen Chen (“Chen”);

1           b.       Working in concert, UMC and Jinhua conspired to induce former MMT  
2                   employees to misappropriate electronic and paper files containing Micron  
3                   trade secrets from MMT and to deliver those trade secrets to UMC;

4           c.       UMC then incorporated Micron's trade secrets into technologies that it  
5                   transferred and/or plans to transfer to Jinhua to enable Jinhua to mass  
6                   produce advanced DRAM products as early as 2018 – thus avoiding  
7                   substantial, time-consuming and costly R&D efforts that UMC or Jinhua  
8                   would have had to undertake to compete fairly.

9           d.       Aware that their trade secret theft was criminal, the participants in the  
10                  conspiracy went to great lengths to hide and cover up their plan, including  
11                  by: lying to human resources personnel when exiting Micron; lying to  
12                  Taiwanese criminal investigators; using software tools to wipe electronic  
13                  evidence; and even attempting to destroy or hide incriminating materials  
14                  from Taiwanese criminal authorities while the authorities were in the middle  
15                  of executing a search warrant at UMC.

16          4.       After Micron initiated this action, Micron discovered that UMC and Jinhua have  
17                  been using Micron's stolen trade secrets to file joint patent applications with the United States  
18                  Patent and Trademark Office that are publishing at an alarming rate ("UMC/Jinhua Patent Filings").  
19                  Micron has now discovered at least ***one hundred sixty one*** (161) UMC/Jinhua Patent Filings—all  
20                  filed after UMC and Jinhua stole and armed themselves with Micron's trade secrets. The vast  
21                  majority of the UMC/Jinhua Patent Filings identify former Micron employees as named inventors  
22                  and Micron has discovered that many of the UMC/Jinhua Patent Filings are based on and derived  
23                  from Micron trade secrets, constituting improper use and disclosure of Micron's trade secrets. By  
24                  using and disclosing Micron's trade secrets in the UMC/Jinhua Patent Filings as set forth herein,  
25                  UMC and Jinhua engaged in acts of misappropriation and acts in furtherance of their  
26                  misappropriation from Micron in the United States, in California, and in this District.

27          5.       The United States has also taken action in response to the Defendants' brazen  
28                  scheme of misappropriation. On or about October 30, 2018, the U.S. Department of Commerce

1 Bureau of Industry and Security published in the Federal Register the determination of the End-  
2 User Review Committee that Jinhua “poses a significant risk of becoming involved in activities that  
3 could have a negative impact on the national security interests of the United States” and it  
4 implemented export controls on Jinhua’s ability to receive U.S. technologies.

5 6. Days later, on November 1, 2018, the U.S. Department of Justice (1) announced a  
6 criminal indictment against Jinhua, UMC, and three former Micron employees – Chen, Ho and  
7 Wang – who left Micron to work for UMC and (2) filed a civil injunction action, all based on the  
8 theft and use of Micron’s trade secrets at issue in this action. *U.S.A. v United Microelectronics*  
9 *Corp., et al.*, Case No. 3:18-cr-00465 (“U.S. Criminal Action”), ECF No. 1 (the “U.S. Indictment”)  
10 and *U.S.A. v United Microelectronics Corp., et al.*, Case No. 5:18-cv-06643 (the “U.S. Civil  
11 Action”). By Order dated November 14, 2018, the U.S. Criminal Action and the U.S. Civil Action  
12 were deemed related to this civil action.

13 7. As the Taiwan Indictment, U.S. Indictment and U.S. Civil Action reflect, UMC and  
14 Jinhua orchestrated and executed one of the boldest schemes of commercial espionage in recent  
15 times. Defendants stand to profit handsomely from their scheme: UMC is prepared to make  
16 hundreds of millions of dollars for its purported “development work,” and Jinhua plans, and already  
17 has begun, to avoid hundreds of millions of dollars in costs and the many years of R&D effort that  
18 honest competition would require.

## 19 **THE PARTIES**

### 20 ***Plaintiff Micron***

21 8. Founded in 1978, Micron is a global leader in advanced semiconductor systems and  
22 solutions. Micron’s portfolio of high-performance memory technologies – including DRAM,  
23 NAND and NOR Flash – is the basis for solid-state drives, modules, multichip packages, and other  
24 system solutions. Micron’s technologies enable the world’s most innovative computing, consumer,  
25 enterprise storage, networking, mobile, embedded, and automotive applications. Marketing its  
26 products primarily to OEMs and retailers around the globe, Micron is ranked among the top five  
27 semiconductor-producing companies in the world. Its common stock is traded on the NASDAQ  
28 under the symbol “MU”.

9. A Delaware corporation with its headquarters in the United States at 8000 South Federal Way, Boise, Idaho 83707-0006, Micron has numerous locations in the United States and around the world, including two locations in this District: (1) Tasman Technology Park, 590 Alder Drive, Milpitas, California 95035; and (2) 110, 120, and 130 Holger Way, San Jose, California 95134 (recently acquired with operations anticipated being transitioned to San Jose from Milpitas).

10. Micron employs over 30,000 people in eighteen countries worldwide, including Taiwan, where it acquired Rexchip Electronics Corp. (“Rexchip”) – previously a joint venture between Elpida Memory, Inc. of Japan and Powerchip Technology Corporation. With its exclusive focus on DRAM production, Rexchip – now MMT – added breadth and depth to Micron’s already world-class DRAM expertise. Micron is the sole owner of trade secrets in the Micron group of companies. Micron in turn licenses its trade secrets to certain subsidiaries such as MMT to enable their business operations.

### ***Defendant UMC***

11. Defendant UMC is a global semiconductor foundry with several manufacturing facilities worldwide, including in Taiwan and Mainland China. UMC has a significant sales presence in the Northern District of California through its wholly-owned subsidiary UMC Group (USA), located at 488 De Guigne Drive, Sunnyvale, California 94085. In its SEC Form 20-F, UMC reported inter-party sales into the United States to UMC Group (USA) of approximately \$1.8 billion. UMC recently reported that 43% of its foundry sales are in North America, and those sales derive primarily from the United States. UMC is publicly traded on the New York Stock Exchange and the Taiwan Stock Exchange. In early 2016, UMC established the so-called New Business Development (“NBD”) group at the Second Factory Area of its Fab 12A in Tainan Science Park, which group was responsible for delivering DRAM technology to Jinhua.

### ***Defendant Jinhua***

12. Defendant Jinhua is a limited liability company founded in Mainland China in early 2016 with the goal to rapidly and aggressively enter the DRAM business. Its shareholders are commercial enterprises ultimately controlled by Fujian Province. With substantial government-funding, Jinhua announced a \$5.65 billion investment in its first 300mm fabrication facility, known

1 in the industry as a “fab”, and broke ground on July 16, 2016. Jinhua planned to begin commercial  
2 DRAM production by 2018. As of February 2016, Jinhua did not employ any engineers  
3 experienced at DRAM technology.

4 ***Co-Conspirators Chen, Rong, Ho, and Wang***

5 13. Co-Conspirator Chen is the former Chairman of Rexchip and former Site Director  
6 of MMT. Chen resigned from MMT on July 31, 2015, and officially joined UMC as Senior  
7 Corporate Vice President less than two months later. At the time Chen joined UMC in  
8 September 2015, UMC was not in the DRAM business and UMC did not manufacture DRAM.  
9 UMC started in DRAM after February 2016. At the time of the events alleged in this complaint,  
10 Chen knew that Micron was headquartered in Boise, Idaho. In 2014 and 2015, Chen traveled to  
11 Micron’s headquarters in Boise, Idaho, making stops in San Francisco, California en route to  
12 Micron.

13 14. Shortly after leaving MMT, Chen began to recruit ranking engineers and team  
14 leaders from MMT to UMC. Chen did so with the knowledge and intent that those MMT personnel  
15 would use Micron trade secrets obtained during their time at MMT for the benefit of UMC and  
16 Jinhua. Later, in or around February 2017, Chen became President of Jinhua while retaining his  
17 role as Senior Corporate Vice President of UMC.

18 15. Co-Conspirator Rong is UMC’s Assistant Vice President, with oversight  
19 responsibility over four divisions and approximately sixty UMC employees. After Chen joined  
20 UMC as Senior Vice President, he assigned Rong to serve as Assistant Vice President of Project  
21 Technology Management Department 2 (“PM2”) – a critical division in UMC’s NBD group.  
22 Thereafter, Rong knowingly conspired with UMC and Chen and directed the misappropriation  
23 efforts of at least two other former MMT personnel in order to incorporate Micron’s trade secrets  
24 into the technology UMC was developing for Jinhua.

25 16. Co-Conspirator Ho is a former Process Integration Engineering (“PIE”) Lead at  
26 MMT. Chen recruited Ho to work as a Process Integration Manager in UMC’s NBD group. Ho  
27 took MMT’s electronic files and paper records – which Taiwanese prosecutors have recognized to  
28 include Micron trade secrets – for use at UMC. Ho also took an active role in recruiting at least one

1 other MMT employee to steal Micron trade secrets. Ho is also a named inventor on at least 25  
2 UMC/Jinhua Patent Filings. At the time of the events alleged in this complaint, Ho knew that  
3 Micron was headquartered in Boise, Idaho.

4 17. Co-Conspirator Wang is a former Process Integration/Device Section Manager at  
5 MMT. No later than January or February 2016, Chen and Ho began recruiting Wang to UMC.  
6 Wang quickly showed interest, and Ho began treating Wang as a UMC team member months  
7 before Wang had resigned from MMT. On the pretext that he would be joining his family's  
8 business, Wang submitted a resignation letter to MMT on April 5, 2016 and asked to have April 26,  
9 2016 be his last day. As described below, during the weeks leading up to his last day, Wang  
10 worked diligently to steal a massive amount of Micron trade secrets for use at UMC. Two days  
11 later, on April 28, 2016, Wang formally joined UMC and was assigned to the PM2 division of the  
12 New Business Development Unit. Wang is also a named inventor on at least five UMC/Jinhua  
13 Patent Filings.

14 ***Doe Defendants***

15 18. Many facets of the conspiracy described herein likely remain unknown, and the  
16 complete list of Co-Conspirators likely extends beyond the individuals and entities identified here.  
17 At present, Micron is ignorant of the true names and capacities of such individuals and entities and,  
18 therefore, sues them herein under the fictitious names Does 1-10. Micron will amend to identify  
19 and state applicable claims, as appropriate, against additional individuals or entities as relevant  
20 information becomes available through discovery.

21 19. Each of the Co-Conspirators referenced in this Second Amended Complaint was an  
22 agent, conspirator, aider or abettor of UMC and/or Jinhua. The acts and omissions of each alleged  
23 Co-Conspirator were performed within the course and scope of that agency, conspiracy, aiding or  
24 abetting. At all relevant times, UMC and Jinhua were each acting with one or more of the Co-  
25 Conspirators pursuant to a common scheme, course of action, enterprise, or conspiracy.

26 20. As used in this Second Amended Complaint, the term "Co-Conspirators" refers  
27 collectively to the Defendants, Co-Conspirator Chen, Co-Conspirator Rong, Co-Conspirator Ho,  
28 Co-Conspirator Wang, and the Doe defendants.



**JURISDICTION AND VENUE**

21. This Court has subject-matter jurisdiction of this case under 28 U.S.C. §§ 1331 and 1338: it is a civil action arising under the laws of the United States – specifically 18 U.S.C. § 1836(b), 18 U.S.C. § 1962(c), and 18 U.S.C. § 1962(d). While the amount in controversy has not yet been quantified, it greatly exceeds \$75,000. Accordingly, this Court also has subject-matter jurisdiction on the basis of diversity of citizenship pursuant to 28 U.S.C. § 1332(a)(2). The Court may also exercise supplemental jurisdiction under 28 U.S.C. § 1367(a).

22. By order dated May 2, 2019, this Court ruled that UMC and Jinhua are subject to the personal jurisdiction of this Court in this case. This Court has specific personal jurisdiction over UMC and Jinhua under Federal Rules of Civil Procedure, including Fed R. Civ. P. 4(k)(2) which contemplates a defendant's contacts with the entire United States. UMC and Jinhua have committed intentional acts of trade secret misappropriation and/or concrete acts in furtherance of its conspiracy to commit trade secret misappropriation in the United States and in the Northern District of California. For example, UMC and Jinhua have jointly applied for and obtained numerous U.S. patents that are based on, derived from, contain and disclose Micron's stolen trade secrets. For further factual allegations regarding UMC and Jinhua applying for and obtaining patents based on Micron's trade secrets from the United States Patent and Trademark Office, see paragraphs 4 and 92-98 herein.

23. In addition, UMC and Jinhua sent a delegation of executives to Northern California, in this District, for five days, for meetings in furtherance of the UMC/Jinhua DRAM Project.

24. The UMC and Jinhua delegation participated in a job fair hosted by the Chinese American Semiconductor Professional Association ("CASPA") on October 23, 2016 in Santa Clara, California to recruit engineers from Silicon Valley. UMC and Jinhua held their recruiting event at the Hyatt Regency Santa Clara, 5101 Great America Parkway, Santa Clara, CA 95054. In the course of that job fair, representatives of UMC and Jinhua actively recruited potential hires—highly-skilled DRAM engineers—relying on aggressive development roadmaps shown to attendees and assurances of technical capabilities made to attendees. These roadmaps and assurances were in fact secretly based on Micron's stolen technology and trade secrets. Usage of these roadmaps and



1 assurances constitute use of Micron's trade secrets, by which UMC and Jinhua engaged in acts of  
2 misappropriation and acts in furtherance of their misappropriation from Micron in California and in  
3 this District.

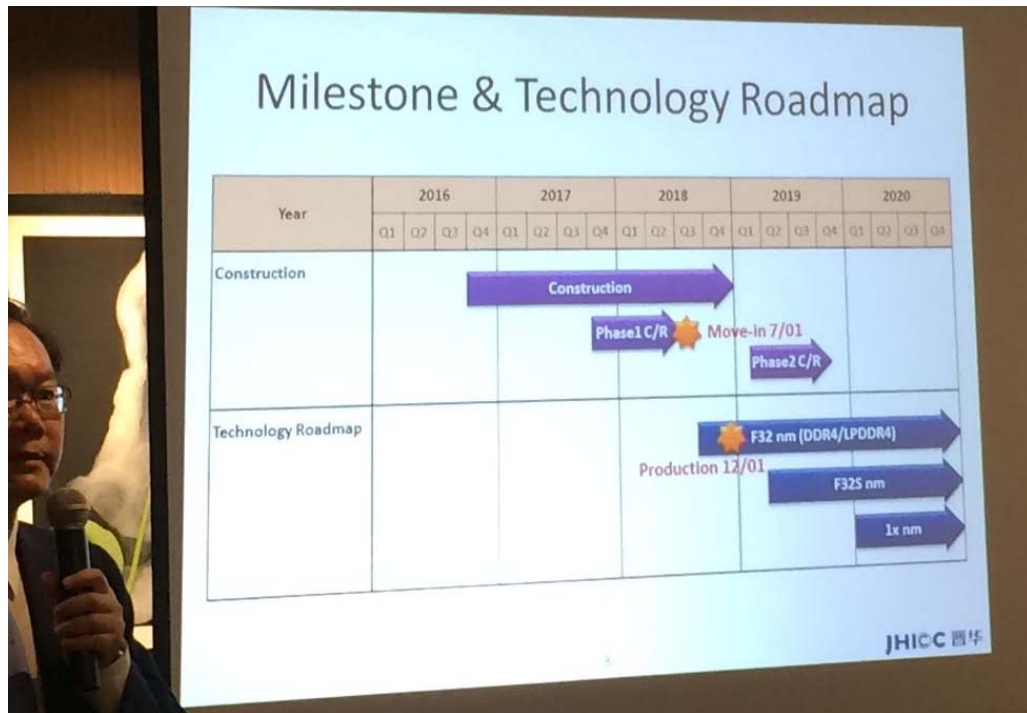
4       25.       On information and belief, UMC representatives at the CASPA recruiting event  
5 were Senior VP Chen, Recruiting Manager Jennifer Wang, HR Director Jeff Yu, and Project  
6 Manager Sandy Kuo, all of whom attended on behalf of Jinhua who sought job applicants for the  
7 UMC/Jinhua DRAM Project. Jinhua had three representatives present at the CASPA recruiting  
8 event including Operation Vice President/COO Albert (Kun-Jung) Wu and Zheng Xu who was  
9 Assistant to the President.

10       26.       Jinhua shipped posters to UMC Group (USA)'s San Francisco office for use at the  
11 recruiting event in Santa Clara, California.

12       27.       Jinhua was recruiting for engineers at the CASPA job fair with UMC's help,  
13 support and assistance including provision of manpower for the recruiting event. UMC and Jinhua  
14 jointly prepared material to present to the attendees at the CASPA recruiting event, including  
15 milestone and technology roadmap information, which relied on Micron's trade secrets and  
16 constituted acts of misappropriation.

17       28.       During the presentation, a speaker from Jinhua introduced the plan to manufacture  
18 DRAM through Jinhua and to use the DRAM in various products, such as personal computers,  
19 automobiles, and consumer devices. On information and belief, the Jinhua speaker was Albert Wu.  
20 He stated that Jinhua planned to construct at least two semiconductor fabrication plants ("fabs"),  
21 and laid out its plans as follows: Construction of the first fab started on July 16, 2016, pilot runs  
22 would start in the fourth quarter of 2017, and production would start in the third quarter of 2018.  
23 Construction of the second fab would be completed by December 31, 2018, pilot runs would start in  
24 the first quarter of 2019, and production would start in the fourth quarter of 2019.

25       29.       The Jinhua speaker's presentation is shown in the following photograph taken  
26 during the presentation.

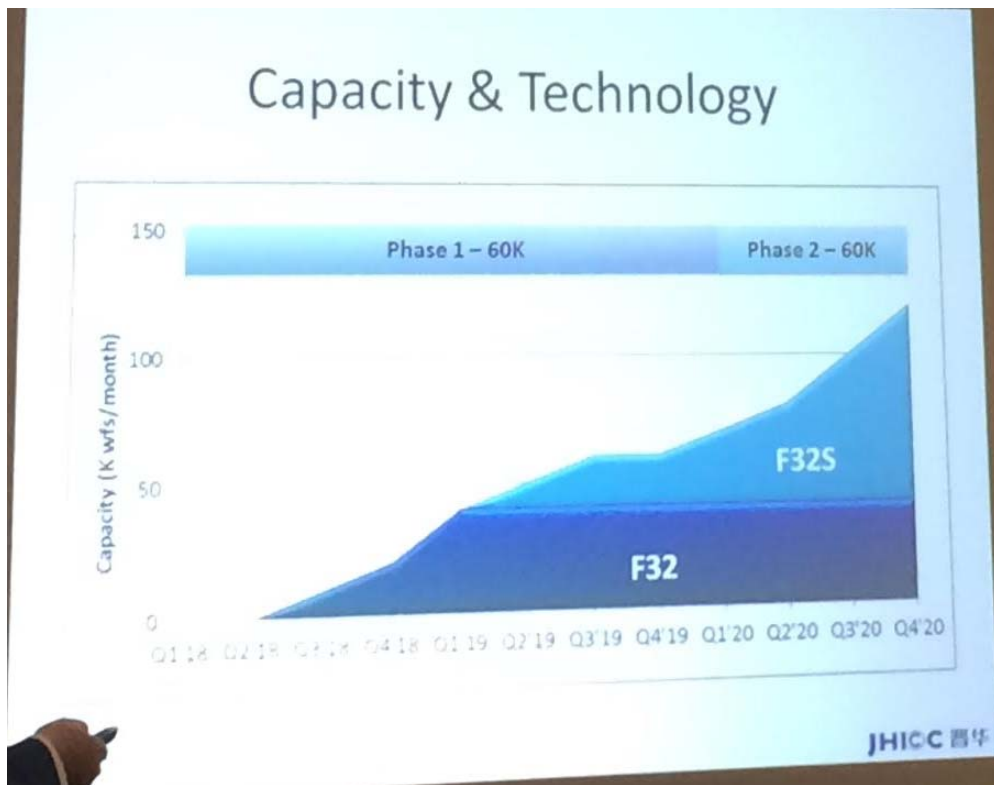


30. As can be seen in the photograph above, the Jinhua speaker went on to talk about the technology types that Jinhua planned to use for its DRAM productions and referred to them as "F32", "F32S" and "1x".

31. During the presentation, an audience member asked the Jinhua speaker how Jinhua could manufacture DRAMs since they did not appear to have the technology. The Jinhua speaker stated that Jinhua was not concerned about DRAM technology development because UMC would provide the technology; however, Jinhua would need many new employees experienced in DRAM technology to effectively carry out its DRAM manufacturing plans with the UMC technology.

32. Subsequently, Chen took over the presentation to explain the DRAM technology development. He mentioned that "F32" referred to the 25nm node process and "F32S" referred to the 20nm process. Chen stated that UMC had started developing its 25nm DRAM technology, and would have the technology ready when Jinhua's first fab construction was completed in 2018. Chen also stated that UMC would transfer the 25nm DRAM technology to Jinhua during the third quarter of 2018 for pilot runs and then mass production. According to Chen, Jinhua would start mass production of DRAM chips using the 25nm node process (*i.e.*, F32) in the first quarter of

2019 and would begin using the 20nm node process (*i.e.*, F32S) in 2020, as can be seen in the following photo taken during Chen's presentation.



33. On information and belief, at this recruiting event, Chen stated that UMC had transferred 25nm and F32 DRAM design technology to Jinhua.

34. After the presentation at this recruiting event, Jinhua and UMC personnel answered questions and collected resumes. During the Q&A section of this job fair, Chen added information on behalf of UMC regarding the technical collaboration timeframe of the UMC/Jinhua DRAM Project. Chen added information regarding the technical development which was done by UMC and the plan for 300 people being involved in R&D activities at UMC for the UMC/Jinhua DRAM Project. Chen also gave a description of the joint development between UMC and Jinhua.

35. At the job fair, UMC and Jinhua recruited for job openings in Research & Development including DRAM Process Technology, DRAM Product Design, DRAM Device Design; in Production Technology including DRAM Process, DRAM Equipment, DRAM Process Integration, and Testing and Sales & Marketing. Jennifer Wang and Sandy Kuo of UMC collected

1 and reviewed resumes and conducted interviews at the CASPA recruiting event on behalf of UMC  
2 and Jinhua.

3 36. By seeking to recruit employees in the United States to assist in producing products  
4 that incorporate Micron's trade secrets, UMC and Jinhua each engaged in acts in furtherance of  
5 misappropriation of Micron trade secrets. Micron is informed and believes that while participating  
6 in this recruiting event in this District, UMC and Jinhua were in continuous possession of stolen  
7 Micron trade secrets. For further factual allegations regarding this recruiting as acts in furtherance  
8 of misappropriation, see paragraphs 80-82 below.

9 37. On the same trip to this District, on October 24, 2016 the delegation of UMC and  
10 Jinhua executives visited major semiconductor equipment vendors in Northern California to discuss  
11 the UMC/Jinhua DRAM Project. The delegation visiting the equipment vendors consisted of ten  
12 individuals from UMC and Jinhua – including shareholders of Jinhua from the government of  
13 China. This delegation included Chen, Jennifer Wang, Sandy Kuo, Jeff Yu, Albert Wu, and the  
14 mayors from the PRC cities of Jinjiang and Quanzhou. Micron is informed and believes that while  
15 visiting the equipment vendors in this District, UMC and Jinhua were in continuous possession of  
16 stolen Micron trade secrets.

17 38. These vendors make and sell equipment used for the manufacture of DRAM. On  
18 information and belief, the UMC and Jinhua delegation visited Applied Materials in Santa Clara,  
19 California, KLA-Tencor in Milpitas, California and Lam Research in Fremont, California – all in  
20 this District. In these meetings, Jinhua made presentations to the vendors and UMC participated as  
21 Jinhua's technical partner. In these meetings with the equipment vendors, Chen provided the  
22 vendors with information related to the UMC/Jinhua DRAM Project and the technology  
23 cooperation in particular, as well as the DRAM technology and roadmap. During the October 2016  
24 trip to this District, the UMC/Jinhua delegation also had dinner with people from Applied  
25 Materials.

26 39. [REDACTED]  
27 [REDACTED]  
28 [REDACTED]

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41. In an October 24, 2016 meeting in this District, KLA-Tencor presented information and materials to UMC and Jinhua that identified specific equipment that KLA-Tencor could supply for the UMC/Jinhua DRAM Project including for wafer inspection, review and analysis; patterning control; reticle inspection; and advanced packaging in support of the UMC/Jinhua DRAM Project.

42. UMC/Jinhua placed orders for DRAM manufacturing equipment with these vendors. The vendors performed tool demonstration work for the UMC/Jinhua DRAM Project. UMC used equipment purchased from these vendors on the UMC/Jinhua DRAM Project. Jinhua paid for and provided UMC with this equipment that UMC used, while UMC paid for the operation and maintenance of the equipment. Jinhua has ordered and purchased equipment from those vendors to support the venture. Ordering of equipment from these vendors for the UMC/Jinhua DRAM Project began as early as 2016.

On information and belief those specifications came from or were derived from Micron's Trade Secrets.

1 [REDACTED] Recipe information is closely guarded information, and Micron  
2 alleges that “recipes” used by UMC and Jinhua came from or were derived from Micron’s trade  
3 secrets.

4 43. [REDACTED]

5 [REDACTED] The VISta Trident system is described  
6 by Applied Materials as the semiconductor industry’s most advanced single-wafer high-current ion  
7 implantation solution, leveraging the VISta high-current ion implant platform’s production-proven,  
8 single-wafer architecture to set new benchmarks for energy purity, uniformity, and angle and dose  
9 rate control to meet advanced node requirements with high yield and the highest  
10 productivity.” <http://www.appliedmaterials.com/products/varian-viista-trident>.

11 44. [REDACTED]

12 [REDACTED]  
13 [REDACTED] Applied Materials described the Centris as “The newest of our semiconductor  
14 processing platforms, the Centris clusters up to six independent process chambers and two plasma  
15 clean chambers, uniquely incorporated into the vacuum loadlocks, around a high-speed transfer  
16 robot that enables throughput of up to 180 wafers per hour – nearly twice that of competing  
17 alternatives.” <http://www.appliedmaterials.com/semiconductor/products/centris/info>. Applied  
18 Materials stated in regard to Sym3, “The redesigned Sym3 chamber environment makes possible  
19 process control to within a few atomic layers within chip, chip to chip, and wafer to wafer. The  
20 Centris platform delivers the excellent repeatability and high productivity demanded for high-  
21 volume manufacturing through system intelligence software that ensures exact process matching  
22 among the six etch chambers and between the two plasma clean chambers mounted on the  
23 platform.” <http://www.appliedmaterials.com/products/centris-sym3-etch>.

24 45. [REDACTED]  
25 [REDACTED]  
26 [REDACTED]  
27 [REDACTED]  
28 [REDACTED]

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED] On information and belief, those  
4 specifications came from or were derived from Micron's trade secrets, and more particularly from  
5 Micron's process flow for its DRAM technology, which Micron maintains as trade secrets.  
6 Specifically, UMC had in its possession several stolen documents containing Micron's process flow  
7 trade secrets, including at least "FAB16 90s Traveler-20150518.pdf,"  
8 "DRAM\_100\_series\_(20nm)\_traveler\_(v00h) 150730," "dram\_110\_series\_(1xnm)\_traveler\_(z11a)-  
9 20150915.pdf," and "dram\_1xnm\_process\_(Z11AA41200)\_-\_summary\_flow\_document.pdf." It is  
10 further alleged that UMC shared this information with Jinhua. Disclosure by UMC and Jinhua of  
11 these Micron trade secrets to Applied Materials in this District constitutes acts of misappropriation  
12 in California.

13 46. These are additional acts of misappropriation and acts in furtherance of  
14 misappropriation of Micron trade secrets by UMC and Jinhua. For further factual allegations  
15 regarding these visits to major semiconductor equipment vendors, see paragraphs 83-84 below.

16 47. UMC and Jinhua intentionally aimed their misconduct at the United States. Wang,  
17 in furtherance of the conspiracy, stored a cache of stolen Micron trade secrets in the United States,  
18 when he uploaded them onto cloud storage hosted on U.S.-based servers. On information and  
19 belief, Wang stole "over 900 confidential and proprietary files belonging to Micron" and  
20 "upload[ed] the files to his personal Google Cloud account stored on servers in the United States"  
21 (U.S. Civil Action at ¶ 24; *see also* U.S. Indictment at ¶ 28), and Wang improperly downloaded  
22 over 1,200 confidential Micron technical files – mostly during his last days at MMT. Of those files,  
23 Wang downloaded at least 174 directly from Micron's Sharepoint system which is hosted  
24 exclusively on U.S. servers. Forensic analysis confirms that many of these files came from  
25 Micron's servers in Boise, Idaho, establishing that Wang repeatedly accessed U.S. servers that host  
26 Micron's Research and Development CAD system – access that Wang gained by specifically  
27 requesting a "New Boise Linux Account" from Micron – after he had already agreed to join UMC.  
28



1 Wang specifically requested access to Micron’s Boise-based CAD system so that he could remotely  
2 view (and make screenshots) of the CAD drawings of Micron’s DRAM chips.

3 48. Chen, Ho, and Wang knew full well that there was an overwhelming likelihood that  
4 at least some of the Micron technology they were acquiring for UMC was coming from the United  
5 States. Each time MMT employees access their company computers, a system initiation banner  
6 advises that they are accessing the data network of the U.S. parent entity “Micron Technology,  
7 Inc.” Similarly, the Micron Code of Conduct—which is a condition of each MMT employee’s  
8 employment—expressly advises that Micron is a U.S. company and that the conduct of MMT  
9 employees may be governed by U.S. law. UMC’s agents were on notice their misappropriation  
10 could reach into the U.S. and be punished by U.S. authorities.

11 49. Forensic evidence documenting Wang’s access to Micron’s U.S. servers, and  
12 Wang’s responsibilities as a Site Collection Administrator (“SCA”) for Micron’s SharePoint  
13 system, confirm that Wang knew his misappropriation efforts directly targeted U.S. servers. Wang  
14 was the SCA for his Process Integration Group. As such, he had principal responsibility for  
15 managing the site quota and the content contained on the group’s SharePoint site, and was  
16 responsible for contacting Micron’s Boise-based IT service desk on behalf of other process  
17 integration engineers. As a SCA, he had access to repeated corporate trainings on SharePoint—  
18 including trainings in which Micron expressly stated that all SharePoint servers were consolidated  
19 in a single Boise location. Wang’s own correspondence confirms he was sophisticated in Micron’s  
20 network, putting him on notice that central SharePoint resources were based in the United States.

21 50. Wang’s own emails show that he contacted Micron’s Boise-based system  
22 administrators to access Micron’s Boise-based R&D CAD servers in January 2016—shortly after  
23 he began discussions with UMC and just before transferring from MMT’s Process Integration  
24 Group into the Quality Assurance Group, where access to highly confidential CAD designs should  
25 not have been necessary. Micron’s system administrators advised Wang that he did “not have an  
26 account on the R&D **Boise** network” and that an account required supervisor approval. *Id.*  
27 (emphasis added). Knowing the R&D CAD system contained some of Micron’s most confidential  
28 trade secrets, Wang contacted Sanderson Wu—the supervisor for his outgoing role in process

1 integration—to improperly obtain access. The Boise-based system administrators then responded  
2 to Wang in an email captioned “New **Boise** Linux account for you.” There they advised him of his  
3 new username and password, and explained that the IP address to which he had been attempting to  
4 connect was incorrect and by identifying the correct address.

5 51. Wang connected to the Boise server to access Micron’s R&D CAD system on no  
6 less than 28 separate days—including on the very last day he was at Micron, while acting as a  
7 UMC “team member”. At the same time Wang was knowingly accessing those Boise servers,  
8 Wang was also operating screen-capture software that allowed him to snip images of the files he  
9 had been viewing for later export, and in fact he created a folder called “25nm 4G3D CAD data” on  
10 his personal Google Drive account.

11 52. Micron alleges on information and belief that Wang used his UMC-assigned laptop  
12 to access his Google Drive stored on U.S.-based servers, Wang downloaded a copy of Micron trade  
13 secret information, and Wang referenced the Micron trade secret information to assist UMC with its  
14 F32 DRAM design rule. On information and belief, UMC employees were directed to use the  
15 information Wang provided to complete UMC’s F32 DRAM design rule. On information and  
16 belief, both Micron’s trade secret information and UMC’s F32 DRAM design rule were stored in  
17 Wang’s Google Drive, and a comparison of the two shows Micron’s trade secret information being  
18 used in UMC’s F32 DRAM design rule document.

19 53. At the time Ho left MMT, Ho knew of Micron’s policy that departing employees  
20 are not to take Micron confidential information with them when they leave Micron. Ho knowingly  
21 took Micron confidential information with him at the time he departed MMT in violation of  
22 Micron’s policy.

23 54. While employed at UMC, Ho stored more than 20,000 files containing Micron  
24 information in his possession on a USB flash drive, and Ho kept a copy of the same 20,000 Micron  
25 files on a Transcend hard disk drive as a back-up.

26 55. UMC improperly had possession of internal confidential Micron documents that  
27 came from Boise, Idaho including, for example, a document titled "DRAM Probe Bins Training for  
28

1 MMJ. Last update: 12/6/13" which stated on it "Fab 4, training and documentation". UMC  
2 personnel, including Ho, knew that Micron's Fab 4 fabrication facility was located in Boise, Idaho.

3 56. While employed at UMC, Ho reviewed and accessed Micron confidential  
4 information on the USB flash drive and the hard disk drive.

5 57. While employed at UMC and working on DRAM development at UMC, Ho had  
6 possession of Micron process travelers containing Micron's trade secrets for manufacturing  
7 DRAM. These process travelers defined Micron's flow and sequence for hundreds of process steps  
8 for manufacturing DRAM.

9 58. UMC discovered that Ho possessed more than 20,000 Micron files on external  
10 drives while employed by UMC. UMC did not discipline Ho for possessing the more than 20,000  
11 Micron files.

12 59. In addition, on information and belief, UMC continually engages in other  
13 commercial activities in the United States, whereby it purposefully avails itself of the protections of  
14 U.S. law. In fact, on August 14, 2014, Micron and UMC entered into a non-disclosure agreement  
15 to protect the parties' respective confidential information – none of which concerned DRAM  
16 technology. In that contract, the parties expressly agreed that the agreement should be governed by  
17 and construed under the laws of California. What is more, UMC reported roughly \$1.8 billion in  
18 sales into the United States through its U.S. subsidiary, UMC Group (USA), which is located in the  
19 Northern District of California. UMC recently noted that 43% of its foundry sales are in North  
20 America, and those sales are primarily in the United States.

21 60. Because Defendant Jinhua is only indirectly owned by Fujian Province in the  
22 People's Republic of China, it does not qualify as an agency or instrumentality of a foreign  
23 sovereign. Accordingly, the Foreign Sovereign Immunities Act, 28 U.S.C. §§ 1602-1611 is not  
24 implicated in this action. Moreover, the claims made herein are based upon Jinhua's commercial  
25 activity carried out in the United States; upon its acts performed in the United States in connection  
26 with commercial activity elsewhere; and upon its commercial activity outside the United States  
27 which activity causes a direct effect in the United States.

61. Much of the most important evidence of misappropriation by UMC and Jinhua is in the United States—from technical details about Micron’s technology, to the measures Micron took to protect its secrets, to the forensic evidence of defendants’ misappropriation, to the economic damage that UMC’s and Jinhua’s misconduct has caused to Micron.

62. Through their trade secret misappropriation scheme, UMC and Jinhua have caused Micron considerable harm in California (where Micron maintains a facility in Milpitas, located in this District, which employs roughly 450 professionals including the executive leadership of the company and business units that market Micron’s DRAM products), in Boise, Idaho (Micron’s corporate domicile), and elsewhere in the United States.

63. Additional allegations supporting the exercise of personal jurisdiction over UMC and Jinhua are set forth below.

64. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b)(2) or, alternatively, 28 U.S.C. § 1391(b)(3).

#### **GENERAL ALLEGATIONS**

65. As Taiwanese and U.S. prosecutors have recognized, Micron and its affiliates have implemented a robust and effective system for controlling access to Micron’s proprietary information:

- a. Micron stores its trade secrets on secure computers that require password-protected access; such access is only supplied to employees and consultants who have obligations of confidentiality to Micron including signed confidentiality agreements and similar additional measures.
- b. Micron requires password protection for both on-site network access and off-site remote network access. Micron-issued laptops use industry-standard encryption protections, such as Bit Locker, to encrypt laptop content.
- c. All Micron personnel are required to protect Micron trade secrets according to Micron’s Business Code of Conduct, and each Micron employee must certify adherence to that Code.

- d. Additional documents requiring that Micron's trade secrets be held in confidence include, but are not limited to, Micron employment agreements, Micron's employment handbooks (including Micron's Taiwan Employment Handbook), Micron's local work rules (including Micron's Taiwan Work Rules), and employee termination agreements.
- e. Micron personnel are required to complete a series of training courses addressing the confidentiality of Micron information. Such training courses include *Protecting Proprietary Information* and *Information Security at Micron*.
- f. Micron implements badge-controlled access to all Micron facilities.
- g. Micron routinely reminds employees of their confidentiality obligations and the importance of protecting trade secrets – including each time an employee accesses Micron's computer network.
- h. Micron marks documents with confidentiality notices such as "Micron Technology, Inc., Confidential and Proprietary" and "Micron Confidential / Do Not Duplicate."

66. Unfortunately, even those extensive protections could not prevent the concerted criminal conspiracy to steal Micron technology described in this Amended Complaint.

67. Beginning at least as early as 2015, UMC and the founders of Jinhua developed and set in motion a plan to induce former MMT employees to misappropriate Micron trade secrets and deliver those trade secrets to UMC, which UMC would then transfer to Jinhua. Under the UMC/Jinhua DRAM Project – to which the Defendants agreed in principle by January 2016 – UMC would provide Jinhua with advanced DRAM technology in exchange for \$300 million in R&D equipment, \$400 million in development fees, co-ownership of the resulting technology, and the potential for additional future licensing revenues.

68. However, as a semiconductor foundry with no advanced DRAM process, UMC had no realistic capability to fulfill its commitments under their agreement. Jinhua knew that UMC did not possess the technological resources to develop the promised technology by itself, and

1 understood that the technology would be based substantially on Micron's DRAM designs and  
2 processes.

3         69. Under Chen's leadership, UMC targeted the Micron entity and fab that Chen knew  
4 best: Rexchip, now MMT. Chen had resigned from MMT on August 31, 2015, and officially  
5 joined UMC weeks later. In his role as Senior Vice President at UMC, Chen headed the NBD  
6 group and held ultimate responsibility for its three technology divisions, including PM2. With  
7 years at the helm of Rexchip and MMT, Chen had a wealth of knowledge on virtually every aspect  
8 of MMT's business – from technical details on Micron's DRAM design and process to Micron  
9 know how on manufacturing optimization, yield management, and product testing and quality.  
10 Chen quickly used his connections within MMT to recruit various MMT personnel with access to  
11 Micron trade secrets regarding many of the engineering and production challenges UMC's NBD  
12 group would inevitably face. Those recruits included Ho and Wang – both of whom would later  
13 work together on process integration problems at UMC's PM2.

14         70. Within weeks of Chen's official start date at UMC, Ho also resigned from MMT.  
15 Upon leaving, Ho took with him both electronic and hard copies of Micron's proprietary  
16 information, in clear and intentional violation of Micron and MMT's corporate policies. As  
17 Taiwanese authorities later explained, Ho then brought those trade secrets to UMC:

18                 Because of his position as the section chief of MMT's mass  
19 production department, JT Ho logged into [MMT's] controlled  
20 server to access electronic records relating to the DRAM production  
21 process, which is MTI's trade secret ("Electronic Record A"). He  
22 copied the records to his own USB . . . and personal hard drive . . .  
23 for his reference any time during work, and possessed the hardcopy  
24 documents containing MTI's trade secrets . . . collectively referred  
25 to as "Paper Documents B[.]"

26                 [//]

27                 Subsequently on October 15, 2015 when JT Ho resigned from  
28 MMT, he did not destroy Electronic Record A and Paper Documents  
B in accordance with the agreements. JT Ho joined UMC in  
November 2015 and became the Process Integration1 Manager  
under PM2 in April 2016. In January 2016, JT Ho was aware that  
UMC started to carry out the cooperation project with Jinhua and  
became MTI's competitor, and he was aware that the Electronic  
Record A and the Paper Document B he possessed could contribute  
to UMC's and Jinhua's mass production of DRAM in Mainland  
China. Instead of deleting or destroying Electronic Record A and

Paper Documents B, JT Ho reviewed Electronic Record A using his UMC issued laptop . . . during the period from January 2016 to February 7, 2017 (the date when [Prosecutors] conducted the search). During this period, he also brought Paper Documents B to the PI1 office for use.<sup>1</sup>

71. In January or February 2016, Ho began efforts to recruit Wang, MMT's Process Integration/Device Section Manager. With help from Ho, Wang submitted his résumé to UMC. Wang later visited UMC, where Rong interviewed him. UMC and Wang agreed that Wang would be hired with the same salary and benefits as he had at MMT, but that if Wang impressed Jinhua and took a job in Mainland China, he would sign another contract with Jinhua and earn substantially more. As Taiwanese prosecutors would later explain:

Subsequently on March 25, 2016, Kenny Wang received an Offer Letter from UMC, and informed JT Ho. . . . JT Ho thus started treating Kenny Wang as a team member of UMC and discussed . . . the issues that UMC had in developing DRAM technologies. Kenny Wang submitted his resignation letter to MMT on April 5, 2016 and left the company on April 26, 2016 upon the company's approval. From April 16 to 23, 2017, being fully aware that MTI and UMC are competitors in the development and manufacturing of DRAM and with the intent to use the information in Mainland China and to damage MTI's interest, Kenny Wang abused his authorization as the Product Quality Integration Manager by using MMT's laptop . . . to log on to MMT's server and to access MTI's electronic information relating to the method, technology, process and design of DRAM ("Electronic Record C," including a total of 931 files), which are protected trade secrets and copyrighted works. He stored Electronic Record C onto the abovementioned laptop, transferred it to a USB storage device . . . and then to two of his own laptops . . . and also uploaded it to his Google Drive . . . .<sup>2</sup>

72. In short, Wang spent his last days at MMT in a frenzied dash to pillage as much of Micron's confidential data as possible. On information and belief, Wang did so at the direction of one or more of his Co-Conspirators. Wang copied stolen files to one or more removable drives, including by using his work-issued laptop. He also uploaded the stolen trade secrets to a Google drive. On information and belief, those stolen trade secrets stored on the Google drive were located on servers located in the United States.

<sup>1</sup> Indictment (Exs. 1 and 2) at 4.

<sup>2</sup> Indictment (Exs. 1 and 2) at 5.



1           73.     The stolen trade secrets covered the gamut of technologies necessary for UMC to  
2 deliver its promised DRAM process to Jinhua. The stolen trade secrets included:

3           Information disclosing Micron's DRAM manufacturing and testing processes;

4           Wafer acceptance test files including test structures/data and layout regarding areas  
5           destroyed in processing;

6           Test programming files;

7           Probe performance and parametric tests showing testing and yield;

8           Test results;

9           Process information for 30nm, 25nm, 20nm, 1Xnm process nodes;

10          Metallization process and layout;

11          Failure-analysis information;

12          Reticle specification files; and many others.

13          74.     After the initiation of this action, Micron discovered, through forensic evidence and  
14 limited jurisdictional discovery, that Defendants stole thousands of confidential Micron files that  
15 detail Micron's trade secret DRAM process and design technologies, including, but not limited to:  
16 (1) Micron's manufacturing processes as described in Micron's process travelers and other process  
17 documentation; (2) Micron's design rules, including electrical design rules and geometrical design  
18 rules; (3) Micron's layout, masks and reticle specification files; (4) Micron's in-line testing  
19 processes; (5) Micron's wafer acceptance testing technology; (6) Micron's wafer sort flow; and  
20 (7) Micron's failure analysis and yield-enhancement data.

21          75.     With full knowledge of his wrongdoing, Wang, working as a "team member" of  
22 UMC, also took a number of steps to try to deceive Micron and cover his tracks. Before returning  
23 his MMT-issued laptop, Wang attempted to wipe his laptop of any incriminating evidence. On  
24 April 23, 2016, he performed Google searches on such terms as "Clear computer data" and "Clear  
25 computer use records", and he accessed various blogs on how to permanently erase a computer  
26 system. Later he downloaded and ran software called "CCleaner" in an attempt to wipe his laptop.  
27 In addition, at his exit interview, on April 26, 2016, Wang lied and reported that he was leaving  
28

1 MMT to go to his hometown to join the family business, when in fact he planned to formally join  
2 UMC only two days later.

3 76. Across the Taiwan strait, Jinhua laid the groundwork for its manufacturing  
4 operations. On July 16 and 17, 2016, Jinhua held a public groundbreaking event for its DRAM  
5 factory. The keynote speakers announced that the project was unique as the largest state-owned  
6 production base for specialty DRAM products. They highlighted that, in its early stages, the Jinhua  
7 project would mainly adopt technology obtained from UMC and that UMC had started talent  
8 acquisition work in Taiwan and other regions. In effect, Jinhua acknowledged that its partner,  
9 UMC, lacked the technical wherewithal for the project and would have to “acquire” the necessary  
10 talent from other companies in Taiwan and elsewhere. Some participants expressed pessimism,  
11 fearing that the officials running Jinhua might underestimate the gap between China’s  
12 semiconductor industry and established semiconductor leaders with decades of investments in  
13 DRAM technology. In the view of some, the gap was too great to overcome.

14 77. UMC and its Co-Conspirators, however, lost little time trying to narrow that gap  
15 illegally – by incorporating the stolen Micron trade secrets. The Indictment issued by Taiwanese  
16 authorities captures at least part of the misappropriation scheme in graphic detail:

17 Subsequently one day in July or August 2016, when attending the  
18 PM2 morning meeting held by Leh-Tian Rong, Kenny Wang was  
19 asked to stay in the meeting room with Ming-De Wei (the manager  
20 of PI2) after the meeting and discuss the draft of the F32 DRAM  
21 design rules presented by Wei. Because UMC has specialized as a  
22 logic process foundry in the past and has no DRAM-related  
23 designer’s manual, PI2 had to use a 65nm logic process designer’s  
24 manual as its blueprint.

25 [//]

26 The abovementioned draft therefore lacked the necessary parameters  
27 of “Cell,” “Array” and “Periphery” in the DRAM design rules.  
28 Kenny Wang thus provided his comments on ion-implantation  
process parameters (a key process to control doping in  
semiconductor manufacturing). Leh-Tian Rong, albeit fully aware  
that Kenny Wang left MMT nearly six months previously and that  
the MMT information Kenny Wang possessed was likely obtained  
illegally, asked Kenny Wang to compare the F32 DRAM design  
rules of UMC with MMT’s materials (i.e. the DR25nmS design  
rules), circle out the differences between the two, write down  
[MMT’s] “stabilization data” on UMC’s draft design rules, fill in  
necessary parameters relating to ion-implantation which cannot be

obtained through reverse engineering, and help complete the parts including “Cell”, “Array”, and “Periphery” for Rong’s review, so that UMC can complete the F32 DRAM design rules more quickly.

[//]

Two to three days after Kenny Wang received the said instructions from Rong, he downloaded UMC’s final version of the logic IC design rules, created columns for “Cell,” “Array” and “Periphery” and filled in parameters for “width” and “space” on more than 10 pages of UMC’s final version of the design rules, using the DR25nmS design rules as a reference. Kenny Wang quickly completed the addition and revision of the parameters and handed in the hard copies containing the parameters of the DR25nmS design rules to Leh-Tian Rong in person.<sup>3</sup>

78. The Micron trade secrets that Wang stole proved invaluable to UMC’s development effort and critical to the timeline of the Jinhua DRAM project. As Taiwanese prosecutors have concluded:

Rong handed [the hard copies] to Wei and told Wei to discuss them with Kenny Wang. Wei, unaware of the foregoing, discussed the stability . . . parameters of UMC’s F32 DRAM design and other parameters with Kenny Wang and Wu Kuo-How, an engineer of PI2, and completed UMC’s F32 DRAM design rules. Originally UMC had no mask tape out team or ion-implantation specialists. After Kenny Wang provided the DR25nmS design rules production parameters, PI2 skipped processes such as the optical lithography adjustment, etching and yellow light processes when developing the F32 DRAM. The design rules were completed within only 2 months and handed to the chip design manufacturer for the next step. Kenny Wang was promoted to Device Manager in January 2017 for excellent performance in reducing the time, costs, equipment and labor in producing the design rules.<sup>4</sup>

79. These acts of misappropriation were encouraged and directed by UMC, Chen and Jinhua. Indeed, in July 2016 – the same period in which Rong and Wang were actively incorporating Micron’s trade secrets into UMC’s DRAM design rules – Chen is reported to have made a presentation to the Hefei Economic Development Board, the governance board for a Mainland development zone near where construction on Jinhua’s DRAM project had recently begun. During that presentation, Chen reportedly told one or more members of the Development Board that he was using “Rexchip” (now Micron) technology at UMC. He reportedly admitted that

<sup>3</sup> Indictment (Exs. 1 and 2) at 6.

<sup>4</sup> *Id.* at 6-7.

1 UMC itself preferred not to have its name attached to Chen's presentation because of concerns over  
2 legal liability.

3         80.       The Co-Conspirators took steps in furtherance of the conspiracy in the United  
4 States as well. In June 2016, Jinhua posted material on the U.S.-based organization CASPA's  
5 website advertising numerous Jinhua job openings in a variety of DRAM positions, including  
6 process and design R&D, manufacturing, DRAM yield and process optimization, and DRAM  
7 testing. In October 2016, UMC and Jinhua sent a travelling delegation to Silicon Valley, including  
8 seven UMC and Jinhua executives, led personally by Chen, to recruit experienced semiconductor  
9 engineers from the U.S. for the UMC/Jinhua DRAM Project. The job fair was hosted by CASPA  
10 and sponsored by Jinhua. Approximately 60-80 engineers attended the CASPA event, and UMC on  
11 behalf of Jinhua interviewed roughly 20 of them, many residing in Northern California. Resumes  
12 and LinkedIn biographies of at least six of the applicants for jobs with the UMC/Jinhua DRAM  
13 project from the CASPA recruiting event show that they reside in Northern California and in this  
14 District. Chen himself contributed to Jinhua's presentation, providing a technology-transfer  
15 roadmap and fielding questions from the audience and prospective hires. During Jinhua's  
16 recruiting presentation, Jinhua's representative unveiled the project timetable and technology  
17 roadmap, which reflected that the first DRAM devices slated for manufacture were designated "F32  
18 nm" and "F32S nm"—the very products whose aggressive production schedule had been made  
19 possible by the misappropriation from Micron. Because Micron is the only DRAM manufacturer in  
20 the world headquartered in the United States, the Co-Conspirators knew or expected that some or  
21 all of their recruits would come from Micron. On information and belief, the Co-Conspirators also  
22 knew and intended that the recruitment of top talent in Silicon Valley would enable UMC and  
23 Jinhua to make optimal use of Micron's trade secrets in the development and operation of Jinhua's  
24 DRAM project.

25         81.       During the presentation, UMC and Jinhua emphasized that Jinhua's first fab would  
26 start its pilot run by the fourth quarter of 2017, with mass production of its first DRAM product  
27 beginning only one year later. This ambitious roadmap, which would tend to assuage any concerns  
28 of job candidates that the project was distant or speculative, would not be possible without the use

1 of the stolen Micron trade secrets. In a shocking admission of their illegitimate intentions, the  
2 slides UMC and Jinhua presented that day openly referred to the venture's first two DRAM  
3 products as "F32" and "F32S", which are the exact internal codenames of DRAM products  
4 developed and designed by Elpida (later acquired and owned by Micron), which had been in  
5 production at the Rexchip fab (now Micron's Fab 16) where Co-Conspirators Chen, Ho, and Wang  
6 all previously worked.

7 82. The recruiting efforts by UMC and Jinhua described herein and taking place in this  
8 District were acts in furtherance of their scheme of misappropriation from Micron.

9 83. While in the Silicon Valley area, UMC and Jinhua also spent several days  
10 conducting business with three specific leading semiconductor equipment vendors – companies  
11 based in Northern California, and in this District. On information and belief, Micron's trade secrets  
12 were disclosed by Co-Conspirators to these equipment vendors from whom equipment was ordered  
13 and purchased for the UMC/Jinhua DRAM Project, all in furtherance of exploiting Micron's stolen  
14 DRAM technology. Micron learned the identities of these equipment vendors in jurisdictional  
15 discovery, but UMC designated their names confidential under the Court protective order.

16 84. Disclosures in California of Micron's trade secrets by UMC and Jinhua to the  
17 semiconductor equipment vendors in California described herein and taking place in this District  
18 were acts of misappropriation and acts in furtherance of their scheme of misappropriation from  
19 Micron.

20 85. UMC and Jinhua also continued to work together to poach additional MMT  
21 personnel in Taiwan for the UMC/Jinhua DRAM Project in China. Recruiting efforts by Sandy  
22 Kuo ("Kuo") – a UMC Project Manager – provide a graphic example. Before joining UMC, Kuo  
23 had been the Manager of Communication and Talent Strategy at MMT, at which time she had  
24 reported directly to Co-Conspirator Chen (then, Site Director of MMT). After Chen left MMT for  
25 UMC, he recruited Kuo to follow him to UMC in February 2016. In her MMT employment  
26 agreement, Kuo had committed, for a period of 12 months after leaving MMT, "not to solicit,  
27 encourage or induce or assist any third party to solicit, encourage or induce" other MMT employees  
28 to take employment outside of MMT.

1           86.       Kuo wasted little time in breaching her non-solicit agreement. In late 2016, she  
2 actively helped Chen to recruit MMT employees for Jinhua – including S.Y. Chen, an MMT  
3 Process Manager with responsibilities in the key process areas of “diffusion” and “wet etch.” In an  
4 email to S.Y. Chen dated November 28, 2016, Kuo underscored how actively involved Jinhua was  
5 in UMC’s improper recruitment efforts: “Stephen [Chen] would like to have more description of  
6 your career in order to clarify your future position and provide to Jinhua investor from China side.”  
7 Kuo even attached a “Jinhua Personnel Sheet” for S.Y. Chen to fill out. Copied on Kuo’s email  
8 was Neil Lee, another former senior manager from MMT who had resigned within weeks of the  
9 resignation of Ho to join UMC/Jinhua. S.Y. Chen subsequently resigned from Micron to join  
10 UMC/Jinhua.

11           87.       Meanwhile, UMC and Jinhua rewarded the individual Co-Conspirators for their  
12 contributions to the illegal scheme. After incorporating Micron trade secrets into UMC’s DRAM  
13 design rules, Wang was promoted to manager of UMC’s Device Department. On February 22,  
14 2017 – shortly after Taiwanese prosecutors raided UMC’s NBD facility – UMC promoted and  
15 transferred Chen to serve as President of Jinhua in Mainland China.

16           88.       The Taiwanese criminal authorities launched their first of two raids on UMC’s  
17 NBD facility on February 7, 2017. When the authorities arrived on site, UMC’s HR team alerted  
18 Rong, who immediately instructed Wang and Ho to delete and remove all information on their  
19 systems relating to Micron. Following Rong’s instruction, Wang and Ho handed anything  
20 containing incriminating materials, including Wang’s cellphone, to a UMC assistant. The assistant  
21 locked the materials in her personal locker and left the UMC facility with Wang’s cellphone.  
22 Unbeknownst to Wang, the criminal authorities had previously obtained a search warrant and had  
23 been monitoring Wang’s cellphone. When confronted with the fact that the criminal authorities  
24 knew about his missing cellphone, Wang lied and said that the assistant borrowed his phone that  
25 morning “because she wanted to see some photos.” At the criminal authorities’ insistence, UMC  
26 instructed the assistant to return to UMC and hand over the phone, which she then did. The  
27 assistant later confessed that she committed a crime in attempting to hide evidence. Because she  
28 later cooperated, and because she was pressured into committing the crime by her UMC superiors,

1 the Taiwanese criminal authorities elected not to indict her (opting to issue a deferred indictment  
2 decision instead).

3       89.       UMC itself admits that Wang's conduct constitutes a crime under Taiwanese law.  
4 In an act of apparent desperation, UMC filed *its own* criminal complaint against Wang, under the  
5 theory that UMC was somehow the victim, rather than the beneficiary and mastermind, of Wang's  
6 trade secret theft. The Taiwanese criminal authorities rejected UMC's complaint, ruling UMC was  
7 no victim here.

8       90.       On August 8, 2017, after nearly a year of investigation, the Taiwanese criminal  
9 authorities indicted UMC, Rong, Ho, and Wang for conspiring to steal and misappropriate Micron  
10 trade secrets in order to deliver that technology to Jinhua to enable it to illegally and unfairly  
11 compete in the DRAM business.

12       91.       The criminal investigation and subsequent indictments have not slowed the Co-  
13 Conspirators' efforts. On May 11, 2017, Jinhua announced a partnership with Air Products, a U.S.  
14 industrial gas supplier, for Air Products to provide gas supply for Jinhua's memory fab. Relying on  
15 Jinhua's aggressive DRAM forecasts, which depend on incorporating Micron's trade secrets, Air  
16 Products committed to build a state-of-the-art nitrogen plant to supply a broad range of ultra-high  
17 purity gases to Jinhua. In July 2017, Jinhua announced its fab construction was ahead of schedule  
18 and kicked off a second wave of recruitment. Even after UMC's Taiwan Indictment for trade secret  
19 theft became public, UMC announced that it was moving ahead full steam with Jinhua and that it  
20 was on track to complete the first stage of the project in 2018.

21       92.       Armed with Micron's trade secrets, UMC and Jinhua have also been applying for  
22 and obtaining from the United States Patent and Trademark Office patents that are based on  
23 Micron's trade secrets. These UMC/Jinhua Patent Filings, which name UMC and Jinhua as joint  
24 assignees, started in September 2016, began publishing in late 2017 and have been publishing at an  
25 alarming rate ever since.

26       93.       To date, Micron has determined that there are at least 161 UMC/Jinhua Patent  
27 Filings, all which were filed *after* the Defendants stole and had possession of Micron's trade  
28 secrets. Many of the UMC/Jinhua Patent Filings describe the same or very similar technologies as



1 described in Micron's stolen trade secrets. Given the short period of time from when UMC and  
2 Jinhua commenced working on the UMC/Jinhua DRAM Project and the priority dates of the  
3 UMC/Jinhua Patent Filings, Micron pleads on information and belief that the Defendants did not  
4 and could not have independently developed the subject matter described in many of the  
5 UMC/Jinhua Patent Filings.

6 94. Moreover, the vast majority of the UMC/Jinhua Patent Filings name former Micron  
7 engineers as named inventors, including for example, co-conspirator Ho (named inventor on at least  
8 25 UMC/Jinhua Patent Filings), co-conspirator Wang (named inventor on at least 5 UMC/Jinhua  
9 Patent Filings) and Neil Lee (named inventor on at least 33 UMC/Jinhua Patent Filings). Notably,  
10 Ho, Wang and Lee did not disclose any inventions to Micron during their years of employment at  
11 Micron, yet in less than a year at UMC and with Micron's stolen trade secrets in hand, these  
12 individuals became named inventors on dozens of UMC/Jinhua Patent Filings. In total, former  
13 Micron employees are named inventors on as many as 110 of the 161 UMC/Jinhua Patent Filings  
14 now known to exist—almost 95%.

15 95. At least the following UMC/Jinhua Patent Filings are based on or derived from  
16 Micron's trade secrets:

17 a. U.S. Patent No. 9,679,901: The '901 Patent is titled "Semiconductor  
18 Device and Manufacturing Method Thereof." It was filed in the United States Patent and  
19 Trademark Office on October 18, 2016, and claims priority to a Chinese application filed on  
20 September 22, 2016. Co-conspirator Ho is one of the named inventors listed on the front page of  
21 the '901 Patent. The '901 Patent improperly discloses Micron's trade secret process for forming  
22 shallow trench isolation and active areas in a DRAM device. This process and the structures  
23 formed by the process are described and disclosed in Micron's process traveler document for its  
24 90 Series (25nm) DRAM products, having the filename "FAB16 90s Traveler-20150518.pdf" at  
25 pages 12-13, 32 and 35-36, and known to be or have been in UMC's possession through the  
26 wrongful acts of one or more of the co-conspirators alleged herein including at least Wang.

27 b. U.S. Patent Application No. 15/384,940; published as 2018/0108563; and  
28 issued as U.S. Patent No. 10,199,258: The '258 Patent and '940 Application are titled "Method of

1 Fabricating Isolation Structure” and was filed in the United States Patent and Trademark Office on  
2 December 20, 2016, claiming priority to a Chinese application filed on October 17, 2016. Co-  
3 conspirator Ho is one of the named inventors listed on the front page of the ‘258 Patent, as is  
4 former Micron employee Neil Lee. The ‘258 Patent and ‘940 Application improperly disclose  
5 Micron’s trade secret process for forming shallow trench isolation in a DRAM device. This  
6 process and the structures formed by the process are described and disclosed in Micron’s process  
7 traveler document for its 90 Series (25nm) DRAM products, having the filename “FAB16 90s  
8 Traveler-20150518.pdf” at pages 21, 23-27, 30 and 33, and known to be or have been in UMC’s  
9 possession through the wrongful acts of one or more of the co-conspirators alleged herein  
10 including at least Wang.

11 c. U.S. Patent No. 9,773,790: The ‘790 Patent is titled “Semiconductor  
12 Device and Method for Forming the Same.” It was filed in the United States Patent and  
13 Trademark Office on March 13, 2017, and claims priority to a Chinese application filed on  
14 December 9, 2016. Co-conspirator Ho is the first listed inventor on the front page of the  
15 ‘790 Patent. The ‘790 Patent improperly discloses Micron’s trade secret process for forming  
16 connections to storage nodes in a DRAM device. This process and the structures formed by the  
17 process are described and disclosed in Micron’s process traveler document for its 90 Series (25nm)  
18 DRAM products, having the filename “FAB16 90s Traveler-20150518.pdf” at pages 239, 240, 242  
19 and 243, and known to be or have been in UMC’s possession through the wrongful acts of one or  
20 more of the co-conspirators alleged herein including at least Wang.

21 d. U.S. Patent No. 9,960,167: The ‘167 Patent is titled “Method for Forming  
22 Semiconductor Device.” It was filed in the United States Patent and Trademark Office on  
23 August 16, 2017, and claims priority to a Chinese application filed on December 9, 2016. Co-  
24 conspirator Ho is the first listed inventor on the front page of the ‘167 Patent. The ‘167 Patent  
25 improperly discloses Micron’s trade secret process for forming storage nodes in a DRAM device.  
26 This process and the structures formed by the process are described and disclosed in Micron’s  
27 process traveler document for its 90 Series (25nm) DRAM products, having the filename “FAB16  
28 90s Traveler-20150518.pdf” at pages 145, 146, 179, 183, 239 and 243, and known to be or have

1 been in UMC's possession through the wrongful acts of one or more of the co-conspirators alleged  
2 herein including at least Wang.

3 e. U.S. Patent No. 9,929,162: The '162 Patent is titled "Semiconductor  
4 Device and Method for Forming the Same." It was filed in the United States Patent and  
5 Trademark Office on March 12, 2017, and claims priority to a Chinese application filed on  
6 December 22, 2016. Co-conspirator Ho is one of the named inventors listed on the front page of  
7 the '162 Patent. The '162 Patent improperly discloses Micron's trade secret process for forming  
8 storage node contact plugs in a DRAM device. This process and the structures formed by the  
9 process are described and disclosed in Micron's process traveler document for its 90 Series (25nm)  
10 DRAM products, having the filename "FAB16 90s Traveler-20150518.pdf" at pages 13, 135, 142,  
11 145, 146 and 176, and known to be or have been in UMC's possession through the wrongful acts  
12 of one or more of the co-conspirators alleged herein including at least Wang.

13 f. U.S. Patent No. 9,859,283: The '283 Patent is titled "Semiconductor  
14 Memory Structure." It was filed in the United States Patent and Trademark Office on April 5,  
15 2017, and claims priority to a Chinese application filed on March 7, 2017. Co-conspirator Ho is  
16 one of the named inventors listed on the front page of the '283 Patent. The '283 Patent improperly  
17 discloses Micron's trade secret process for forming active regions and bitlines in a DRAM device.  
18 This process and the structures formed by the process are described and disclosed in Micron's  
19 process traveler document for its 90 Series (25nm) DRAM products, having the filename "FAB16  
20 90s Traveler-20150518.pdf" at pages 103 and 104, as well as Micron's peripheral design rules  
21 document for its 90 Series (25nm) DRAM products, having the filename "[DR25nmS] Design  
22 Rules Periphery\_EES-2012000026-013\_Rev.13.xls" at Figure 12-2, and known to be or have been  
23 in UMC's possession through the wrongful acts of one or more of the co-conspirators alleged  
24 herein including at least Wang.

25 g. U.S. Patent No. 10,128,251: The '251 Patent is titled "Semiconductor  
26 Integrated Circuit Structure and Method for Forming the Same." It was filed in the United States  
27 Patent and Trademark Office on September 9, 2016. On information and belief, three of the  
28 named inventors listed on the '251 Patent, Yu-Ting Li, Jen-Chien Lin and Wen-Chin Lin, are

1 former employees of Micron Technology. The ‘251 Patent improperly discloses Micron’s trade  
2 secret process for simultaneous array and peripheral structure formation in a DRAM device. This  
3 process and the structures formed by the process are described and disclosed in Micron’s process  
4 traveler document for its 90 Series (25nm) DRAM products, having the filename “FAB16 90s  
5 Traveler-20150518.pdf” at pages 13, 80, 82, 91, and 95, and known to be or have been in UMC’s  
6 possession through the wrongful acts of one or more of the co-conspirators alleged herein  
7 including at least Wang.

8 h. U.S. Patent No. 10,192,777: The ‘777 Patent is titled “Method of  
9 Fabricating STI Trench.” The application was filed in the United States Patent and Trademark  
10 Office on December 27, 2017, and claims priority to a Chinese application filed on December 29,  
11 2016. On information and belief, four of the six inventors listed on the ‘777 Patent, Hsien-Shih  
12 Chu, Ming-Feng Kuo, Yi-Wang Zhan and Fu-Che (Neil) Lee, are former employees of Micron  
13 Technology. The ‘777 Patent improperly discloses Micron’s trade secret process for shallow  
14 trench isolation formation in a DRAM device. This process and the structures formed by the  
15 process are described and disclosed in Micron’s process traveler document for its 90 Series (25nm)  
16 DRAM products, having the filename “FAB16 90s Traveler-20150518.pdf” at pages 27, 28, 29  
17 and 31, and known to be or have been in UMC’s possession through the wrongful acts of one or  
18 more of the co-conspirators alleged herein including at least Wang.

19 i. U.S. Patent No. 10,062,700: The ‘700 Patent is titled “Semiconductor  
20 Storage Device and Manufacturing Method Thereof.” It was filed in the United States Patent and  
21 Trademark Office on March 14, 2017, and claims priority to a Chinese application filed on  
22 December 30, 2016. On information and belief, three of the named inventors listed on the  
23 ‘700 Patent, Fu-Che (Neil) Lee, Chien-Cheng Tsai and Hsien-Shih Chu, are former employees of  
24 Micron Technology. The ‘700 Patent improperly discloses Micron’s trade secret process for  
25 forming storage node cell contacts in a DRAM device. This process and the structures formed by  
26 the process are described and disclosed in Micron’s process traveler document for its 90 Series  
27 (25nm) DRAM products, having the filename “FAB16 90s Traveler-20150518.pdf” at pages 139,  
28

1 148, 152, 156 and 159, and known to be or have been in UMC's possession through the wrongful  
2 acts of one or more of the co-conspirators alleged herein including at least Wang.

3 j. U.S. Patent Application No. 15/856,084; published as US 2018/0190657:  
4 The '084 Application is titled "Capacitor Structure and Fabrication Method Thereof." The  
5 application was filed in the United States Patent and Trademark Office on December 28, 2017, and  
6 claims priority to a Chinese application filed on December 30, 2016. Former Micron employee  
7 Fu-Che (Neil) Lee is one of the named inventors on the '084 Application. The '084 Application  
8 improperly discloses Micron's trade secret process for forming a capacitor structure in a DRAM  
9 device. This process and the structures formed by the process are described and disclosed in  
10 Micron's process traveler document for its 90 Series (25nm) DRAM products, having the filename  
11 "FAB16 90s Traveler-20150518.pdf" at pages 197, 199 and 202, and known to be or have been in  
12 UMC's possession through the wrongful acts of one or more of the co-conspirators alleged herein  
13 including at least Wang.

14 k. U.S. Patent No. 10,204,911: The '911 Patent is titled "Method for  
15 Fabricating Capacitor." It was filed in the United States Patent and Trademark Office on January  
16 2, 2018, and claims priority to a Chinese application filed on January 6, 2017. Former Micron  
17 employee Fu-Che (Neil) Lee is a named inventor on the '763 Application. The '911 Patent  
18 improperly discloses Micron's trade secret process for fabricating a capacitor structure in a DRAM  
19 device. This process and the structures formed by the process are described and disclosed in  
20 Micron's process traveler document for its 90 Series (25nm) DRAM products, having the filename  
21 "FAB16 90s Traveler-20150518.pdf" at pages 219, 225, 226, 230-231, 234, 237 and 240, and  
22 known to be or have been in UMC's possession through the wrongful acts of one or more of the  
23 co-conspirators alleged herein including at least Wang.

24 For each of these UMC/Jinhua Patent Filings, the Defendants took the egregious action of not only  
25 stealing Micron's trade secrets, but claiming those stolen trade secrets as their own with the United  
26 States Patent and Trademark Office.

27 96. The UMC/Jinhua Patent Filings noted above were filed by United States Registered  
28 Patent Agents from (1) JC Patents, located at 4 Venture, Suite 250, Irvine California; and (2) North

1 America Intellectual Property Organization (NAIPO), located in Taiwan. The JC Patents registered  
2 U.S. Patent Agents include Jiawei Huang (Reg. #43330, address on file with the United States  
3 Patent and Trademark Office as JC Patents, 4 Venture, Suite 250, Irvine, California 92618 US,  
4 Primary Telephone (949) 660-0761, date registered as agent 04/28/1998). JC Patents prosecuted at  
5 least two of the UMC/Jinhua Patent Filings containing trade secrets—namely the ‘901 Patent and  
6 the ‘258 Patent. The NAIPO registered U.S. Patent Agents include Xuan Zhang (Reg. # 66781,  
7 address on file with the United States Patent and Trademark Office as IntelllFluence Patent Firm,  
8 9910 Baldwin Place, El Monte, California 91731 US, Primary Telephone (626) 628-7931, date  
9 registered as agent 07/12/2010) and Scott Margo (Reg. #56277, address on file with the United  
10 States Patent and Trademark Office as 3305 Northland Dr. Suite 305, Austin, Texas 78731 US,  
11 Primary Telephone (512) 459-9292). At least nine of the UMC/Jinhua Patent Filings containing  
12 Micron trade secrets were prosecuted by NAIPO, of which Xuan Zhang from El Monte, California  
13 was listed as a patent agent for those nine patents and applications—namely the ‘790 Patent,  
14 ‘167 Patent, ‘162 Patent, ‘283 Patent, ‘251 Patent, ‘777 Patent, ‘700 Patent, ‘084 Application and  
15 ‘911 Patent.

16 97. Both UMC and Jinhua executed a Power of Attorney document enabling their U.S.  
17 Patent Agents to prosecute the UMC/Jinhua Patent Filings on their behalf. These Power of  
18 Attorney documents, which were filed with the United States Patent Office, were executed by Chia-  
19 Tsung Hung, the Chairman of UMC, and by Xu Zheng, the General Manager Assistant of Jinhua.  
20 In addition, the named inventors on the UMC/Jinhua Patent Filings executed Declaration and  
21 Assignment documents that were also filed with the United States Patent Office transferring their  
22 individual rights to UMC and Jinhua, which included an affirmation that the inventors were “the  
23 original joint inventor of a claimed invention in the application” and also acknowledged “that any  
24 willful false statement made in this Declaration is punishable under 35 U.S.C. 1001 by fine or  
25 imprisonment of not more than 5 years, or both.”

26 98. The U.S. Patent Agents of JC Patents and NAIPO prosecuted each of the  
27 UMC/Jinhua Patent Filings on behalf of UMC and Jinhua by corresponding with the United States  
28 Patent Office and by filing numerous documents including the above noted Power of Attorney and

1 Declarations, as well as numerous information disclosure statements, application data sheets, and  
 2 responses to Office Actions with claim amendments and arguments in order to secure issuance of  
 3 the UMC/Jinhua Patent Filings. At least two of the UMC/Jinhua Patent Filings (the '901 Patent  
 4 and the '258 Patent) were prosecuted by an agent of defendants located in Irvine, California. The  
 5 remaining nine UMC/Jinhua Patent Filings (the '790 Patent, '167 Patent, '162 Patent, '283 Patent,  
 6 '251 Patent, '777 Patent, '700 Patent, '084 Application and '911 Patent) were prosecuted by  
 7 NAIPO, and further list a patent agent from El Monte, California. On information and belief all of  
 8 the UMC/Jinhua Patent Filings were prosecuted entirely or in part by U.S. patent agents located in  
 9 California.

10 99. In order for the U.S. patent agents located in California to prosecute the  
 11 UMC/Jinhua Patent Filings, UMC and Jinhua necessarily disclosed Micron's trade secrets to  
 12 JC Patents and Xuan Zhang located in California. These disclosures of Micron's trade secrets to  
 13 individuals in California constitute acts of misappropriation in California. Moreover, JC Patents  
 14 and Xuan Zhang as agents of UMC and Jinhua used those trade secrets in preparing applications for  
 15 the UMC/Jinhua Patent Filings in California. Using Micron's trade secrets in California in patent  
 16 applications constitute acts of misappropriation in California.

17 100. Micron seeks civil redress to the full extent of applicable law.

## 18 **COUNT I**

### 19 **Misappropriation of Trade Secrets under the Defend Trade Secrets Act**

#### 20 **18 U.S.C. § 1836(b)**

21 101. Micron repeats, realleges and incorporates herein by reference the allegations of  
 22 paragraphs 1 through 100, inclusive, above.

23 102. The above alleged facts constitute actual and threatened misappropriation of  
 24 Micron trade secrets by UMC and Jinhua under 18 U.S.C. §§ 1836 and 1839.

25 103. At all times relevant to this Amended Complaint, Micron owned the Micron trade  
 26 secrets as Micron was the entity in which rightful legal or equitable title to the Micron trade secrets  
 27 is reposed.  
 28



1           104.     The Micron trade secrets include scientific, technical, economic, and engineering  
2 information. The Micron trade secrets include plans, compilations, program devices, formulas,  
3 designs, prototypes, methods, techniques, processes, procedures, programs, and/or codes, which are  
4 tangible and/or intangible.

5           105.     Micron has taken reasonable measures to protect the secrecy of the Micron trade  
6 secrets.

7           106.     The Micron trade secrets derive independent economic value, actual or potential,  
8 from not being generally known to, and not being readily ascertainable through proper means by,  
9 another person who can obtain economic value from the disclosure or use of the information.

10          107.     The Micron trade secrets are related to and used in Micron products and services  
11 sold or intended for use in interstate or foreign commerce.

12          108.     Micron derives significant economic benefits from owning the Micron trade  
13 secrets.

14          109.     The Co-Conspirators improperly acquired, disclosed, used, appropriated, took,  
15 carried away, concealed, copied, duplicated, downloaded, replicated, transmitted, sent, uploaded,  
16 communicated, or conveyed the Micron trade secrets for the benefit of UMC and Jinhua. They  
17 performed such acts in furtherance of the trade secret misappropriation in at least Taiwan, Mainland  
18 China, the United States and the Northern District of California.

19          110.     The use of the Micron trade secrets by Co-Conspirators was without Micron's  
20 authorization. Micron did not consent to their acquisition, disclosure, or use of the Micron trade  
21 secrets.

22          111.     The Co-Conspirators intended to convert the Micron trade secrets to the economic  
23 benefit of one other than their owner, Micron.

24          112.     The Co-Conspirators knew and intended that Micron, as the owner of the Micron  
25 trade secrets, would be injured by their actions.

26          113.     As a result of the Co-Conspirators' misappropriation of Micron trade secrets,  
27 Micron has suffered actual damages in an amount to be proven at trial.  
28

1           114. As a result of the Co-Conspirators' misappropriation, UMC and Jinhua have been  
2 unjustly enriched.

3           115. Micron further pleads entitlement to a reasonable royalty to compensate Micron for  
4 UMC's and Jinhua's misappropriation of trade secrets.

5           116. Micron is informed and believes, and thereon alleges, that Defendants'  
6 misappropriation of Micron's trade secrets was willful and malicious based on the facts alleged  
7 herein. UMC and Jinhua acted with a purpose and willingness to commit the acts alleged, and  
8 UMC's and Jinhua's conduct was not reasonable under the circumstances. Micron is therefore  
9 entitled to exemplary damages and attorney fees and costs. Micron further seeks exemplary  
10 damages against UMC and Jinhua in an amount up to two times the amount of Micron's actual  
11 damages according to proof under 18 U.S.C. § 1836.

12           117. The misappropriation of the Micron trade secrets has caused and will continue to  
13 cause Micron irreparable and substantial injury and therefore cannot be fully redressed through  
14 damages alone.

15           118. If the Co-Conspirators were permitted to continue to use and disseminate the  
16 Micron trade secrets, Micron will be irreparably harmed and the economic damages to Micron will  
17 be difficult to quantify. An injunction prohibiting UMC and Jinhua from further acquisition,  
18 disclosure, use, and possession of the Micron trade secrets is necessary to provide Micron with  
19 complete relief.

20           119. UMC's and Jinhua's wrongful conduct alleged herein by their misappropriation of  
21 Micron's trade secrets will continue unless enjoined and restrained by this Court, and will cause  
22 great and irreparable injury to Micron's business, and it could cause UMC and Jinhua to have  
23 improper advantages, positions, and rights in the marketplace to Micron's detriment. Absent  
24 injunctive relief, UMC's and Jinhua's further disclosure and use of Micron's trade secrets could  
25 irreparably harm Micron.

**COUNT II****Civil RICO****18 U.S.C. § 1962(c)**

120. Micron repeats, realleges and incorporates herein by reference the allegations of paragraphs 1 through 119, inclusive, above.

121. The Co-Conspirators formed an association-in-fact enterprise (the “Enterprise”) to engage in activities to affect interstate and foreign commerce by collaborating to misappropriate and use Micron’s trade secrets to manufacture advanced DRAM products in Mainland China for sale and distribution in China and around the world. The Enterprise operated by the Co-Conspirators includes UMC and Jinhua but is separate and distinct from either of them.

122. In furtherance of the Enterprise, the Co-Conspirators intended to and knowingly stole and, without Micron’s authorization, copied, downloaded, uploaded, photocopied, replicated, transmitted, delivered, communicated, or conveyed Micron’s trade secrets.

123. The Co-Conspirators also received, acquired, or possessed Micron’s trade secrets, knowing that they had been stolen, obtained, or converted without Micron’s authorization.

124. The Co-Conspirators intentionally engaged in these acts to benefit UMC and Jinhua, with the knowledge or intent that these acts would injure Micron. They did so at least in Taiwan, Mainland China, the United States and the Northern District of California.

125. The actions of the Co-Conspirators abroad and in California constitute racketeering activities in violation of 18 U.S.C § 1832. This pattern of activity poses a threat of continuing because Jinhua and UMC are continuing to proceed with the production of DRAM products using Micron’s trade secrets.

126. UMC benefited from its employees’ and agents’ racketeering activities, and the racketeering activities of Chen, Rong, Ho, and Wang were committed within the scope of their employment while at UMC.

127. Micron incurred and continues to incur substantial internal investigation costs, computer forensic costs and increased operational costs as a result of Co-Conspirators’ misappropriation, constituting concrete financial loss and injury to Micron. Co-Conspirators’

misappropriation necessitated that Micron dedicate resources, time, expense and costs for internally investigating Co-Conspirators' wrongdoing, including assigning Micron personnel including Jonathan Heller (Sr. IT Security Analyst), Terence Acker (Manager, Security) and James Whitely (Sr. Manager, Cyber Defense) to the internal investigation. Micron's internal investigation included expenditure of hundreds of hours of time, effort and labor in collecting evidence, analyzing data, coordinating within Micron regarding investigation efforts and findings, searching for devices including the Micron-issued laptop used by Kenny Wang to carry out misappropriation of Micron's trade secrets, imaging the Micron-issued laptop that had been assigned to Kenny Wang and making an exact duplicate of the hard drive, determining what data Kenny Wang and others took from Micron, analyzing Micron's DLP (Data Loss Prevention) server information, analyzing firewall logs, analyzing proxy logs, preparing reports of the investigation for Micron management, collecting data from Sharepoint servers and other data sites, accessing data that Kenny Wang sought to delete from his Micron-issued laptop, assembling evidence of misappropriation, evaluating .pst files from Kenny Wang's Micron-issued laptop, reviewing reports of the investigation, and having Micron personnel based in Boise, Idaho travel to Taiwan for purposes of this investigation. Micron's computer forensic investigation further involved collecting computerized data from the image of Kenny Wang's Micron-issued laptop, performing key word searches, exporting data, analyzing data, assessing techniques regarding forensic approaches to discover data that Kenny Wang sought to delete from his Micron-issued laptop, searching for and evaluating artifacts from Kenny Wang's Micron-issued laptop, and writing reports. Micron employee Jonathan Heller dedicated more than eighty hours of labor in his first two months of work on this investigation in performing tasks listed above. Following that initial period, Jonathan Heller spent in excess of an additional three hundred hours of labor working on this investigation by performing many of the tasks listed above. Other Micron personnel who committed time, effort and labor to this investigation and tasks listed above include Terence Acker and James Whitely. In addition to the time, effort and labor described above, Micron incurred expense and cost for computer storage devices used for copies of Kenny Wang's Micron-issued laptop for investigative purposes, as well as shipping expense and travel expense. Micron also incurred the expense of

1 third party computer forensics consultants at Berkeley Research Group, LLC (“BRG”) in an  
2 amount in excess of \$350,000 in fees and expenses associated with BRG’s engagement to conduct  
3 an investigation and forensic analysis into the downloading of Micron computer files from United  
4 States-based servers by Kenny Wang and potentially others.

5 128. As a direct and proximate result of racketeering activities and violations of  
6 18 U.S.C. § 1962(c) by the Co-Conspirators, Micron has suffered economic damages both  
7 domestically and abroad, including, but not limited to, injuries in the Northern District of California  
8 and in Boise, Idaho, in an amount to be proven at trial.

9 129. The aforementioned acts of the Co-Conspirators were done willfully, with malice  
10 toward Micron, entitling Micron to treble damages, attorneys’ fees, and costs.

11 130. The racketeering activities and violations of 18 U.S.C. § 1962(c) has caused and  
12 will continue to cause Micron irreparable and substantial injury and therefore cannot be fully  
13 redressed through damages alone. An injunction prohibiting UMC and Jinhua from further  
14 acquisition, disclosure, use, and possession of the Micron trade secrets is necessary to provide  
15 Micron with complete relief.

16 131. If the Co-Conspirators were permitted to continue to engage in their racketeering  
17 activities and violations of 18 U.S.C. § 1962(c), Micron would be irreparably harmed and the  
18 economic damages to Micron will be difficult to quantify.

19 **COUNT III**

20 **Civil RICO**

21 **18 U.S.C. § 1962(d)**

22 132. Micron repeats, realleges and incorporates herein by reference the allegations of  
23 paragraphs 1 through 131, inclusive, above.

24 133. The Co-Conspirators have intentionally conspired and agreed to directly and  
25 indirectly participate in the affairs of the Enterprise through a pattern of racketeering activities in  
26 violation of 18 U.S.C § 1832, as described in Count II.

134. The Co-Conspirators knew that their actions constituted a pattern of racketeering activities and agreed to those actions in furtherance of, and for the benefit of the Enterprise, as described in Count II.

135. The actions of the Co-Conspirators constitute a conspiracy to violate 18 U.S.C § 1962(c), in violation of 18 U.S.C § 1962(d).

136. As a direct and proximate result of racketeering activities and violations of 18 U.S.C. § 1962(d) by the Co-Conspirators, Micron has suffered economic damages both domestically and abroad, including, but not limited to, injuries in the Northern District of California and in Boise, Idaho, in an amount to be proven at trial.

137. The aforementioned acts of the Co-Conspirators were done willfully, with malice toward Micron, entitling Micron to treble damages, attorneys' fees, and costs.

#### COUNT IV

##### **Trade Secret Misappropriation Under the California Uniform Trade Secrets Act**

##### **Cal. Civ. Code § 3426**

138. Micron repeats, realleges and incorporates herein by reference the allegations of paragraphs 1 through 20, 22 through 58, and 65 through 100, inclusive, above.

139. Micron sues under the California Uniform Trade Secrets Act based on the misappropriation of its trade secrets in California through Co-Conspirators' improper disclosure of Micron trade secrets to patent agents in California, the use by those agents of Co-Conspirators in preparing the UMC/Jinhua Patent Filings based on Micron's trade secrets, Co-Conspirators' use of Micron's trade secrets in preparing a presentation and providing assurances to recruits at the CASPA job fair in California, Co-Conspirators' disclosure of Micron's trade secrets to Applied Materials located in Santa Clara, California, and the use of those trade secrets by Co-Conspirators, all as alleged in above paragraphs 4, 24, 27, 42, 45, 46, 83, 84, and 95 through 99.

140. The Micron trade secrets constitute information, including compilations, programs, devices, methods, techniques, or processes that derive independent economic value from not being generally known to the public or other persons who can obtain economic value from the trade secrets' disclosure.

1           141.     Micron has taken reasonable measures to protect the secrecy of the Micron trade  
2 secrets.

3           142.     However, the Co-Conspirators intended to and knowingly stole and, without  
4 authorization, disclosed, acquired, used, copied, downloaded, uploaded, photocopied, replicated,  
5 transmitted, delivered, communicated, or conveyed Micron's trade secrets.

6           143.     The Co-Conspirators acquired, used or disclosed Micron's trade secrets, knowing  
7 that they have been stolen, obtained, or converted without Micron's authorization. The Co-  
8 Conspirators intentionally engaged in these acts to benefit UMC and Jinhua, with the knowledge or  
9 intent that these acts would injure Micron.

10          144.     As a direct and proximate result of violations of Cal. Civ. Code § 3426.1 by the Co-  
11 Conspirators, Micron has suffered economic damages both domestically and abroad, including, but  
12 not limited to, in the Northern District of California and in Boise, Idaho, in an amount to be proven  
13 at trial but exceeding \$75,000.

14          145.     The aforementioned acts of the Co-Conspirators were done willfully, with malice  
15 toward Micron.

16          146.     As a result of UMC's and Jinhua's misappropriation, Micron has suffered actual  
17 damages and UMC and Jinhua have been unjustly enriched. Micron pleads in the alternative that, if  
18 it is determined that neither actual damages nor unjust enrichment is provable, then Micron is  
19 entitled to a reasonable royalty to compensate Micron for misappropriation of trade secrets by  
20 UMC and Jinhua.

21          147.     Micron further seek exemplary damages against UMC and Jinhua in an amount up  
22 to two times the amount of Micron's actual damages according to proof under Cal. Civ. Code  
23 § 3426.3.

24          148.     Micron is informed and believes, and thereon alleges, that Defendants'  
25 misappropriation of Micron's trade secrets was willful and malicious based on the facts alleged  
26 herein. UMC and Jinhua acted with a purpose and willingness to commit the acts alleged, and their  
27 conduct was not reasonable under the circumstances. Micron is therefore entitled to exemplary  
28 damages, attorney fees, and costs under Cal. Civ. Code § 3426.4.



149. The wrongful conduct and misappropriation of Micron's trade secrets alleged herein will continue unless enjoined and restrained by this Court, and will cause great and irreparable injury to Micron's business, and it could cause UMC and Jinhua to have improper advantages, positions, and rights in the marketplace to Micron's detriment. Absent injunctive relief, further disclosure and use of Micron's trade secrets by UMC and/or Jinhua would irreparably harm Micron.

## COUNT V

### Trade Secret Misappropriation Under the Idaho Trade Secrets Act

#### Idaho Code § 48-801, *et seq.*

150. Micron repeats, realleges and incorporates herein by reference the allegations of paragraphs 1 through 20, 22 through 25, 27 through 58, 65 through 95, and 97 through 100, inclusive, above.

151. Micron sues under the Idaho Trade Secrets Act based on the Co-Conspirators' misappropriation of Micron's trade secrets, including trade secrets contained in files knowingly downloaded from Micron's servers located in Boise, Idaho, as alleged in paragraphs 47, 49 through 51, and 55, inclusive, above.

152. The Micron trade secrets constitute information, including compilations, programs, devices, methods, techniques, or processes that derive independent economic value from not being generally known to the public or other persons who can obtain economic value from the trade secrets' disclosure.

153. Micron has taken reasonable measures to protect the secrecy of the Micron trade secrets.

154. However, the Co-Conspirators intended to and knowingly stole and, without authorization, disclosed, acquired, used, copied, downloaded, uploaded, photocopied, replicated, transmitted, delivered, communicated, or conveyed Micron's trade secrets.

155. The Co-Conspirators acquired, used or disclosed Micron's trade secrets, knowing that they have been stolen, obtained, or converted without Micron's authorization. The Co-

1 Conspirators intentionally engaged in these acts to benefit UMC and Jinhua, with the knowledge or  
2 intent that these acts would injure Micron.

3 156. As a direct and proximate result of violations of Idaho Code § 48-801 by the Co-  
4 Conspirators, Micron has suffered economic damages both domestically and abroad, including, but  
5 not limited to, in the Northern District of California and in Boise, Idaho, in an amount to be proven  
6 at trial but exceeding \$75,000.

7 157. The aforementioned acts of the Co-Conspirators were done willfully, with malice  
8 toward Micron.

9 158. As a result of UMC's and Jinhua's misappropriation, Micron has suffered actual  
10 damages and UMC and Jinhua have been unjustly enriched. Micron pleads in the alternative that, if  
11 it is determined that neither actual damages nor unjust enrichment is provable, then Micron is  
12 entitled to a reasonable royalty to compensate Micron for misappropriation of trade secrets by  
13 UMC and Jinhua.

14 159. Micron further seeks exemplary damages against UMC and Jinhua in an amount up  
15 to two times the amount of Micron's actual damages according to proof under Idaho Code § 48-  
16 803.

17 160. The wrongful conduct and misappropriation of Micron's trade secrets alleged  
18 herein will continue unless enjoined and restrained by this Court, and will cause great and  
19 irreparable injury to Micron's business, and it could cause UMC and Jinhua to have improper  
20 advantages, positions, and rights in the marketplace to Micron's detriment. Absent injunctive  
21 relief, further disclosure or use of Micron's trade secrets by UMC and/or Jinhua would irreparably  
22 harm Micron.

### 23 PRAYER FOR RELIEF

24 WHEREFORE, Micron respectfully requests that the Court enter judgment against all  
25 defendants as follows:

- 26 a. For actual damages in an amount to be proven at trial;  
27 b. For award of expense and cost incurred by Micron as a result of  
28 defendants' wrongdoing alleged herein including all costs incurred to respond to,

1 investigate and determine the scope, details and implications of defendants' wrongful  
2 actions alleged herein, including the internal investigation costs, computer forensic  
3 costs and increased operational costs alleged above.

4 c. Restitution, unjust enrichment, and disgorgement of profits from UMC  
5 and Jinhua resulting from misappropriation of Micron's trade secrets;

6 d. Royalties;

7 e. Entry of an order that restrains and preliminarily enjoins, and a Final  
8 Order that permanently enjoins, UMC, Jinhua, and their agents, servants, employees,  
9 attorneys, and all persons acting in active concert or participation with them, from the  
10 unauthorized acquisition, disclosure, use, duplication, or distribution of the Micron  
11 trade secrets;

12 f. Entry of an order that all right, title and interest in patents improperly  
13 based on or derived from Micron trade secrets misappropriated by defendants be  
14 assigned or otherwise transferred to or declared owned by Micron;

15 g. Exemplary and punitive damages;

16 h. Treble damages as provided in 18 U.S.C. §§ 1964(c) and 1964(d);

17 i. Reasonable attorneys' fees and costs;

18 j. Prejudgment interest;

19 k. For such other and further relief as the Court deems just and proper.

20 Dated: May 24, 2019

JONES DAY

21  
22 By: s/ Randall E. Kay  
23 Randall E. Kay

24 Counsel for Plaintiff  
25 MICRON TECHNOLOGY, INC.  
26  
27  
28

**DEMAND FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Micron demands a jury trial on all issues triable to a jury.

Dated: May 24, 2019

JONES DAY

By: s/ Randall E. Kay

Randall E. Kay

Counsel for Plaintiff  
MICRON TECHNOLOGY, INC.